

2 cont.

- (b) encoding a [physiologically active and/or immunogenic] derivative of said at least one [a] polypeptide displaying a physiological and/or immunological activity substantially similar to the physiological and/or immunological activity of said expression product as described in (a); or
- (c) which is complementary to a polynucleotide sequence as defined in (a) or (b).

3. (Amended) An isolated polynucleotide fragment according to claim 1 or 2:

- (a) encoding the polymerase (POL) [virion core polypeptide (GAG) and/or envelope] polypeptide [(ENV)];
- (b) encoding a [physiologically active and/or immunogenic] derivative [of a] polypeptide displaying a physiological and/or immunological activity substantially similar to the physiological and/or immunological activity of the polymerase (POL) as described in (a); or
- (c) which is complementary to a polynucleotide sequence as defined in (a) or (b).

4. (Amended) An isolated polynucleotide fragment according to claim [1] 2:

- (a) encoding the virion core polypeptide (GAG)[, polymerase (POL) and] and/or envelope polypeptide (ENV);
- (b) encoding a [physiologically active and/or immunogenic] derivative [of a] polypeptide displaying a physiological and/or immunological activity of said virion core polypeptide (GAG) and/or envelope polypeptide (ENV) as described in (a); or
- (c) which is complementary to a polynucleotide sequence as defined in (a) or (b).

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5. (Amended) An isolated polynucleotide fragment [according to any one of claims 1 to 4 wherein the polynucleotide fragments is a deoxyribose nucleic acid (DNA) fragment] displaying at least 90% sequence identity with the sequence as shown in Figures 2 or 3:

(a) ~~encoding the virion core polypeptide (GAG), polymerase (POL) and envelope polypeptide (ENV) of porcine retrovirus (PoEV);~~

(b) ~~encoding a derivative polypeptide displaying a physiological and/or immunological activity substantially similar to the physiological and/or immunological activity of said GAG POL and ENV polypeptides as described in (a); or~~

(c) ~~which is complementary to a polynucleotide sequence as defined in (a) or (b).~~

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8. (Amended) A recombinant nucleic acid molecule comprising a polynucleotide fragment according to any one of claims 1 to [7].

A3

12. (Amended) A prokaryotic or eukaryotic host cell transformed by a polynucleotide fragment, recombinant nucleic acid molecule, or vector according to any of claims 1 to 5 and 8 to 11.

13. (Amended) A recombinant PoEV polypeptide [or derivative thereof displaying POL PoEV physiological and/or immunogenic] comprising an amino acid sequence as shown in Figure 3 displaying POL activity.

14. (Amended) A recombinant PoEV polypeptide [or derivative thereof displaying GAG and/or ENV PoEV physiological and/or immunogenic activity] comprising an amino acid sequence with at least 95% sequence identity to the GAG amino acid sequence as shown in Figure 3.

A3
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15. (Amended) A recombinant PoEV polypeptide [or derivative thereof displaying GAG, POL and ENV PoEV physiological and/or immunogenic activity] comprising an amino acid sequence with at least 75% sequence identity to the ENV amino acid sequence as shown in Figures 3 or 4.

16. (Amended) A recombinant PoEV polypeptide [according to any one of claims 13 to 15] comprising a sequence as shown in Figures 3 or 4, [or functionally active derivative thereof] or derivative polypeptide displaying a physiological and/or immunological activity of the PoEV polypeptide.

A4

18. (Amended) An anti-PoEV antibody or fragment thereof [capable of binding to a polypeptide or fragment] raised against a polypeptide or derivative according to any one of claims 13 or 16.

19. (Amended) A polynucleotide primer which is [PoEV specific] capable of specifically hybridizing to a PoEV polynucleotide fragment as shown in figures 1, 2, 3 or 4 and capable of initiating chain extension from the 3' end of the primer, but which is not able to correctly initiate chain extension from non PoEV sequences.

20. (Amended) A polynucleotide probe which is capable of specifically [hybridising] hybridizing under stringent conditions to a [PoEV] polynucleotide sequence as shown in Figures 1, 2, 3 or 4, but not to non PoEV sequences under stringent conditions.

A1 cont. 21. (Amended) A probe or a primer according to claims 19 or 20 which [has] have substantial nucleotide sequence identity with a strand of the molecule depicted in Figures 1, 2, 3 or 4 or a strand complementary therewith, with a corresponding RNA molecule, or with a part of such a molecule.

05 23. (Amended) Use of a PoEV specific polynucleotide primer or probe according to any of claims 19 to 22 in the detection of PoEV in a sample.

24. (Amended) Use of a PoEV specific polynucleotide [in a PCR] primer or primers according to either of claims 19 or 21 in a polymerase chain reaction for the detection of PoEV in a sample.

05 26. (Amended) Cells, tissues or organs obtainable from a pig [accoding] according to claim [25] 33.

27. (Amended) [Use of a] A recombinant PoEV polypeptide according to any one of claims 13 to 16 for use in the preparation of a vaccine.

28. (Amended) Use of an anti-PoEV antibody. [a] polynucleotide primer or probe according to any of claims 19 to 21 in the preparation of a detection kit capable of detecting the presence of PoEV nucleic acid in a sample.

29. (Amended) [Use of a] A polynucleotide; polypeptide; antibody; cells, tissues or organs according to any one of claims 1 to [7] 5, 11 to 13, [to] 16 or 26 in therapy or diagnosis.